

VOLPYANSKIY, Lev Markovich; DUGINA, N.A., tekhn.red.

[Casting in shell molds] Lit'e v obolochkovykh formakh. Moskva,
Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 66 p.
(Nauchno-popularnaya biblioteka rabochego-litseiashchika, no.9)
(MIRA 14:3)

(Shell molding (Pouring))

VOLPYANSKIY, S.Ya.

GIROVSKIY, V.F., nauchnyy rabotnik; KANTORER, S.B., nauchnyy rabotnik; SHASS, M. Ye., nauchnyy rabotnik; D'YAKOVA, M.V., nauchnyy rabotnik; BABENKO, A.P.; VOLPYANSKIY, S.Ya.; MERZLYAK, G.H.

[Socialist competition for cost reduction in construction work] Sotsialisti-cheskoe sorevнование за снижение стоимости строительных работ. [Avtorskii kollektiv: V.F.Girovskii i dr.] Moskva, Gos.izd-vo lit-ry po stroitel'stvu i arkhitekture, 1953. 55 p.

1. Moszhilstroy treat (for Babenko, Volpyanskiy, Merzlyak). 2. Kufedra Organizatsii i planirovaniya stroitel'nogo proizvodstva MIEI imeni S.Ordzhonikidze. 3. Moskovskiy inzhenerno-ekonomicheskiy institut imeni S.Ordzhonikidze (for Girovskiy, Kantorer, Shass, and D'yakova).

(Construction industry--Costs)

VOL-RABINOVICH, L., inzh.

Polystyrol adhesive. Mest.prom.i khud.promys. 3 no.12:30 D '62.
(MIRA 16:2)

1. TSentral'naya laboratoriya upravleniya khimicheskoy
promyshlennosti Moskovskogo gorodskogo ispolnitel'nogo komiteta
Moskovskogo gorodskogo soveta deputatov trudyashchikhsya.
(Styrene polymers)

L 18955-63

EPR/EWP(j)/EPF(c)/EWT(m)/BDS AFFTC/ASD Ps-4/Pc-4/Pr-4

RM/NW/MAY

ACCESSION NR: AP3006543

S/0191/63/000/009/0053/0055

AUTHOR: Vol-Rabinovich, L. L.

72

TITLE: Polymerizable adhesive for polystyrene plastics 15

SOURCE: Plasticheskiye massy*, no. 9, 1963, 53-55

TOPIC TAGS: polystyrene, plastics, PK adhesive

ABSTRACT: A/polymerizable adhesive for polystyrene plastics was developed based on PK resin, a solution of hard polystyrene in styrene monomer. The adhesive is non-toxic, can be made in different viscosities by varying amount of polystyrene in monomer, and can be used with advantage over solvent adhesives such as dichlorethane. "The toxicological test was carried out under the supervision and by the immediate division of G. Ya. Kel'man." Orig. art. has: 1 figure.

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 30Sep63

ENCL: 00

SUB CODE: MA

NO REF SOV: 001

OTHER: 001

Card 1/1

VOLRAT, A. [Volrate, A.]

Intestinal viruses carrier state in healthy children before and after vaccination with live poliomyelitis vaccine. Vestis Latv ak no.4:139-144 '62.

1. Institut mikrobiologii AN Latviyskoy SSR.

VOLRAT, A. [Volrata, A.]

Occurrence of enteroviruses in healthy children. Vestis Latv ak
no.3:97-102 '61.

1. Institut mikrobiologii AN Latviyskoy SSR.

*

KUKAIN, R. [Kukaine, R.]; INDULEN, M. [Induléna, M.]; KANEL', I. [Kanele, I.];
KONDRASHOVA, M.; KALNINYA, B. [Kalnina, V.]; VOLRAT, A. [Volrate, A.];
FELDMAN, G. [Feldmane, G.]; NAGAYEVA, L.; PAVLOVA, M.; POPOVA, V.

Characteristics of the tuberculin tests in children inoculated
during early infancy with β -oral BCG vaccine and live poliomyelitis
vaccine. Vestis Latv ak no.7:115-117 '62.

1. Institut mikrobiologii AN Latviyskoy SSR.

L 31205-66 EWT(l)/EWP(t)/ETI IJP(c) JD
ACC NR: AP6022603 SOURCE CODE: CZ/0032/65/015/012/0938/0942

AUTHOR: Volenik, K.; Vlasakova, L.; Volrabova, H.; Lastovkova, O.

37
B

ORG: State Research Institute for the Economic Use of Material, Prague (Statni vyzkumny ustav ochrany materialu)

TITLE: Determining the actual surface area of metal samples from krypton adsorption

SOURCE: Strojirenstvi, v. 15, no. 12, 1965, 938-942

TOPIC TAGS: metal surface, krypton, gas adsorption, chemical laboratory apparatus

ABSTRACT: The article describes a method of measuring the actual surface area of metal samples by calculating it from the adsorption of krypton and also the laboratory equipment required for its application. Although the method is quite accurate and is practically the only one which can be used by plants, it has disadvantages, as the measurements take much time and the equipment is rather sophisticated. This paper was presented by Engineer M. Roubal. Orig. art. has: 8 figures and 1 table. [Based on authors' Eng. abst.] [JPRS]

SUB CODE: 11, 07 / SUBM DATE: none / ORIG REF: 002 / SOV REF: 001
OTH REF: 004

Card 1/1 BLG

UDC: 531.7.621.787: 546.294

0945

OC 8-21

188300

30593
Z/032/61/011/011/002/005
E112/E555

AUTHORS: Vlasáková, I., Votrubová, H. and Voteník, K.

TITLE: Initial stages of steel corrosion at elevated temperatures

PERIODICAL: Strojírenství, v.11, no.11, 1961, 843-847

TEXT: The present paper is based on the theory of Cabrera and Mott (Ref.1: Rec. Progr. in Phys., 12, p.163) which proposes that for each metal and set of conditions there is a critical temperature at which a transition between two types of corrosion mechanisms can be observed. Above the critical temperature, the main factor affecting corrosion is diffusion of metal cations to the surface of the metal. The rate of oxidation can be expressed by the parabolic law:

$$x^2 = kt + a, \quad (1)$$

where x - thickness of layer, t - time, and k and a are constants. Therefore, a corrosion process which obeys the parabolic law will proceed without reaching a maximum and the layer thickness will increase with time. On the other hand, the corrosion mechanism below the critical temperature is determined by an

Card 1/5

30593

Initial stages of steel corrosion ... Z/032/61/011/011/002/005
EL12/E535

electric double layer and is characterized by a fairly rapid initial growth of the layer, soon reaching a maximum limiting thickness. The limiting thickness is an inverse function of absolute temperature, T , and can be represented graphically as a straight line, intersecting the abscissa at the critical temperature, T_k . Determination of limiting thickness at various temperatures and extrapolation of the plots of inverse thickness against T will produce the critical temperature, T_k , at which the growth of the corrosion layer, affected merely by the electric double layer, will reach its maximum. Beyond the critical temperature corrosion will proceed by the ionic diffusion mechanism, without ever reaching a maximum. Therefore, determination of the critical temperature is based on an accurate measurement of the layer thickness at different temperatures and atmospheric conditions. A novel optical method is now described which permits the determination of layer thickness within an accuracy of a few Å. It is based on previous work of A. Vášíček (Ref.4; Čs. čas. fys., 4, p. 74) dealing with changes of the ellipticity of polarized light on being reflected from the surface of the studied objects. The layer thickness is computed from changes of ellipticity and the refractive indices.

Card 2/5

30593

Initial stages of steel corrosion ... Z/032/61/011/011/002/005
E112/E535

of the metal and its oxide. The thickness of corrosion layers at the initial stages of corrosion at relatively low temperatures ranges from a few tens to a few hundreds of Å, and conventional methods have been found inadequate to measure the course of oxidation. The optical method permits following the growth of the corrosion layers with great accuracy from a knowledge of the optical constants of the material and ellipticity changes of polarized light. On the basis of the test results the critical temperatures of steels with varying amounts of B are tabulated. They range from 217°C for the Czech constructional steel 13 030 to 277°C for steels with very high (10%) B contents. Furthermore, the thickness of layers are plotted against corrosion times at different temperatures for seven different types of steel (Abscissa - time of oxidation, in hours; axis 4 thickness of layer, d, in Å). The new method permits examining the corrosion resistance of steel constructional materials in 60-80 hours, whereas conventional procedures require 500 to 1000 hours and produce only subjective evaluations. The method is recommended by the authors as a standard test. There are 11 figures, 2 tables and 6 references.

Card 3/5

Initial stages of steel corrosion ...

30593
Z/032/61/011/011/002/005
E112/E535

4 Soviet-bloc and 2 non-Soviet-bloc. The English-language references read as follows: Ref.1 (quoted in test), Ref.6: Vernon, W.H.J., Calnan, E.A., Clews, C.J.B., Nurse, T.J., 1953, Proc.Roy. Soc.(A) 216, p.375.

ASSOCIATION: Státní výzkumný ústav ochrany materiálu, Praha
(State Research Institute for the Protection of Materials, Prague).

Fig.7.
(With
0.35% B)

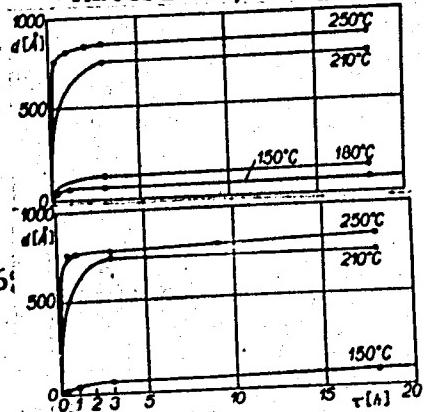
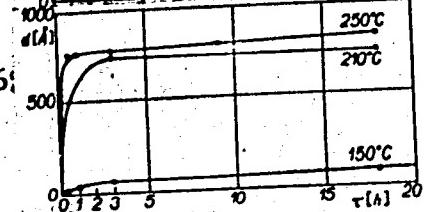


Fig.8.
(With 0.76%
B)



Card 4/5

Fig.9
(With
6% B)

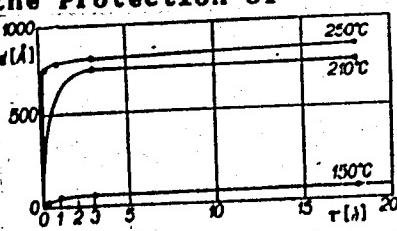
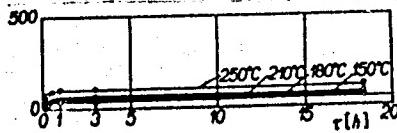


Fig.10
(With
10% B)



Initial stages of steel corrosion ... 30593
Z/032/61/011/011/002/005
E112/E535

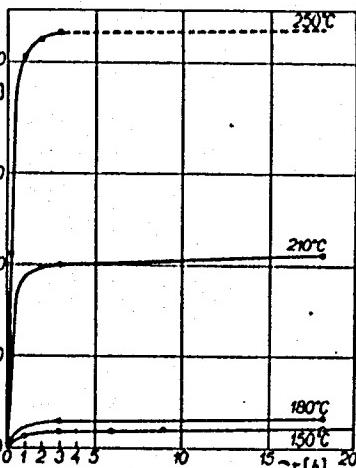
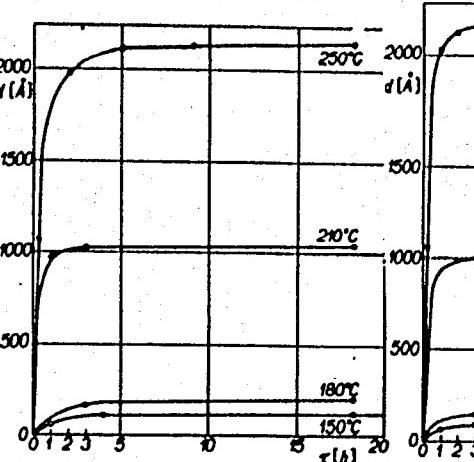
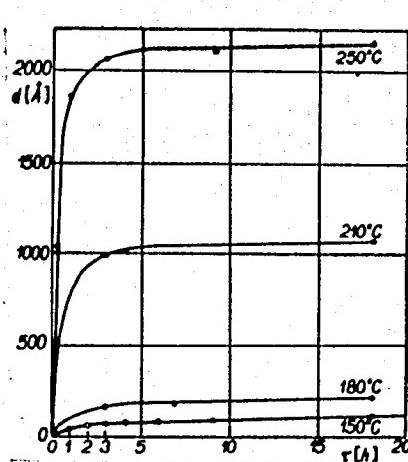


Fig. 3. Steel 13 030.

Fig. 4. Steel 12 022

Fig. 5. Steel 15 110

Card 5/5

VOLRAT, A. [Volrate, A.] (Riga)

Occurrence of enteroviruses in healthy children. Vestis Latv ak
no. 3:97-102 '61. (EEAI 10:9)

1. Akademiya nauk Latviyskoy SSR, Institut mikrobiologii.

(Viruses) (Children in Latvia)

VOLRATE, A. (Riga)

Finding intestinal viruses in healthy children. Report I. (To be continued) Vestis Latv ak no.4:155-158 '60. (EEAI 10:7)

1. Latvijas PSR Zinatnu akademija, Mikrobiologijas institūts.
(VIRUSES) (INTESTINES) (CHILDREN)

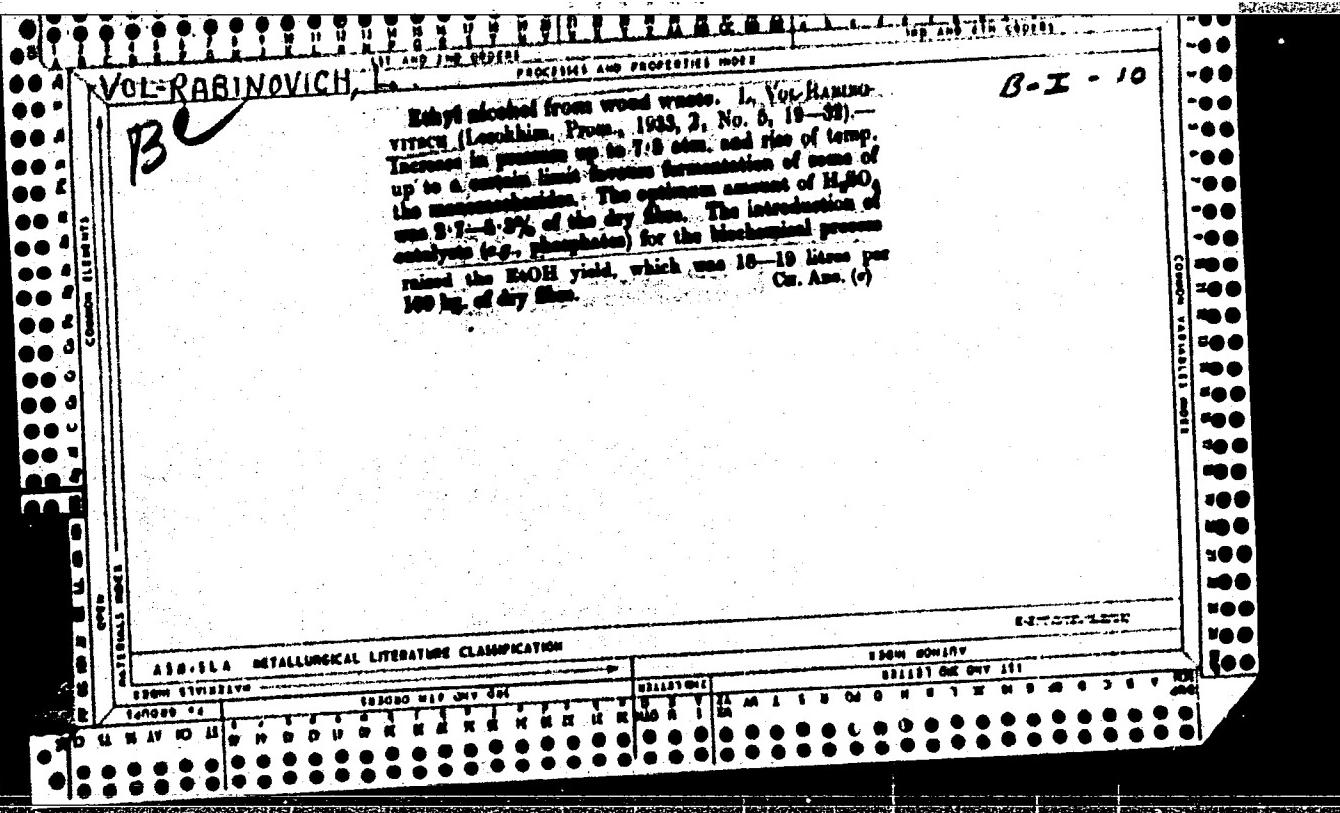
DAYON, M.I.; VOLYNSKIY, V.Kh.

Measurement of momenta of fast charged particles and investigation of nuclear reactions with energies in the range of

10^{-10} to 10^{-12} eV. Zhur.eksp.i teor.fiz. 37 no.4:906-909
'59. (MIRA 13:5)

1. Fizicheskiy institut imeni P.N.Lobedeva Akademii nauk
SSSR.

(Particles (Nuclear physics))
(Nuclear reactions)



PROCESSES AND PROPERTIES INDEX

Ethyl alcohol from wood waste. L. Vol-Rabminovich, *Zoekhnicheskaya Prom.*, 2, No. 5, 10-32 (1933).—Increase in the pressure during the hydrolysis up to 7.5 atm. and in the temp., up to a certain limit favors the fermentation of some of the monosaccharides, accelerating the decomposit. of pentoses and other reducing substances formed in the hydrolysis, which decompose with greater ease at elevated temp. than the dextrose. The amt. of the catalyst (in this case dil. H_2SO_4) is the basic factor, while the acidity of the soln. is of a minor influence on the yield of saccharides. Best results are obtained with a H_2SO_4 concn. of 2.7 to 5.2% of the dry fiber. This introduction of additional catalysts which favor the biochemical process, such as phosphates, raises the yield of $C_6H_{12}O_6$ from 7.6 to 10.11 l. per 100 kg. of dry fiber. The stepwise hydrolysis of the fiber causes a more complete action, raising the yield of saccharides to 41.0% of the wt. of the dry fiber; 30% of the saccharides is useful for fermentation, and this permits a yield of C_2H_5OH (95%) to 18-19 l. per 100 kg. of dry fiber. A. A. Bochtingink

22

ca

A.S.H.-S.L.A. METALLURGICAL LITERATURE CLASSIFIED

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APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9"

LO0826-66 ENT(1)/EWG(v)/FCC/EEC-L/ESA(h) GW

ACCESSION NR: AP5020685

UR/0033/65/042/004/0859/0861
523.745

39
36

B

AUTHOR: Vol'shakova, O. V.

TITLE: Intensity variations of the solar wind with the solar activity phase cycle,
from data of stable magnetic field variations

SOURCE: Astronomicheskiy zhurnal, v. 42, no. 4, 1965, 859-861

TOPIC TAGS: solar wind, magnetic field, solar activity

ABSTRACT: The seasonal changes in the pc4 amplitude were investigated so that the changes in the solar wind intensity as a function of the solar activity phase cycle could be estimated. The data covered a time interval of 8 years--from 1957 to 1964. This corresponds to intervals of high, medium, and low activity. It is shown that the mean amplitude of the type pc4 short-period variations of the earth's magnetic field corresponding to the solar wind during the quiet period ($K_p = 0$) remains constant throughout the 8 years of observation. It is concluded that the intensity of the solar wind from undisturbed solar regions does not change with the solar activity phase cycle. Orig. art. has: 1 figure.

Card 1/2

L00826-66

ACCESSION NR: AP5020605

ASSOCIATION: Geofizicheskaya stantsiya, Borok Instituta fiziki Zemli, Akademii nauk
SSSR (Borok Geophysical Station, Institute of Terrestrial Physics, Academy of
Sciences, SSSR) 44.55

SUBMITTED: 29Mar65

ENCL: 00

SUB CODE: AA

NO REF Sov: 001

OTHER: 001

Melby
Card 2/2

L 9959-65 ENT(z)/CPR/T/EXP(b) . Ps-4 ASD(s)-S/RADM(t) JD/NLK
ACCESSION NR: AT4046863 8/0000/64/000/000/032P/0330

AUTHOR: Panin, V. Ye., Dudarev, Ye. F., Vol'shanina, M. A.

TITLE: Suzuki atmospheres and their importance in hardening of alloys B

SOURCE: AN SSSR. Nauchny'y sovet po problem'e zhаропрочny'kh splavov. Issledovaniya staley i splavov (Studies on steels and alloys). Moscow, Izd-vo Nauka, 1964

TOPIC TAGS: Suzuki atmosphere, metal strength, metal crystal, crystal structure, alpha solution, alloy hardening, copper aluminum alloy, copper zinc alloy, defect energy

ABSTRACT: It is well known that one of the factors contributing to the hardening of alloys in the alpha solid solution are the Suzuki atmospheres occurring in the defects of tensile dislocations. This lowers the dislocation mobility and increases the yield point. Since the Suzuki atmospheres vary slightly with temperature, they are very important at high temperatures. Several articles (H. Suzuki, P.A. Flinn) have dealt with Suzuki atmospheres. However, even the latest article by Suzuki does not define the relationship between the defect energy and Suzuki atmosphere concentration. The present article shows this relationship based on the latest publication by Suzuki for alloys with low defect energy. On the basis of phase equilibrium equations, the author evolves numerical equations for Cu-Al and Cu-Zn alloys with low defect energy. Fig. 1 of the Enclosure shows the concentration

Cord 1/4

L-9959-65

ACCESSION NR: AT4046863

for Cu-Zn alloys, while Fig. 2 shows the same for Cu-Al alloys. In previous publications it has been incorrectly suggested that the importance of Suzuki atmospheres increases as the solid solution concentration increases. Solid solutions disintegrate after low temperature annealing following deformation. An equation is evolved showing that the hardening depends on the defect energy for the given alloy. Precise calculations cannot as yet be made since several factors are still unknown, e.g. the defect energy with a Suzuki atmosphere. However, for small Suzuki atmospheres, the values may be found. For Cu + 38 at. % Zn the contribution of the Suzuki atmosphere in hardening does not exceed 1.5 kg/min². In conclusion, it is suggested that empirical curves of hardening should be constructed. Orig. art. has: 2 figures and 14 equations.

ASSOCIATION: none

SUBMITTED: 16Jun64

ENCL: 02

SUB CODE: MM

NO REF SOV: 004

OTHER: 005

Card

2/4

L 9959-65
ACCESSION NR: AT4046863

ENCLOSURE: 01

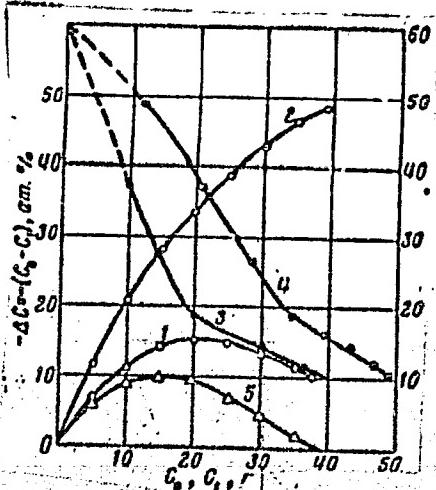


Fig. 1. Concentration relationships of $\Delta C/C$, $\gamma(C_0)$, $\gamma(C_1)$ for Cu-Zn alloys ($T=293K$);

\circ — $(-\Delta C) = -(C_0 - C_1) = f(C_0)$; \circ — $C_1 = \varphi(C_0)$
 \circ — $\gamma = \gamma(C_0)$; \circ — $\gamma = \gamma(C_1)$; \circ — $(-\Delta C) = f(C_1)$

Card 3/4

L 9959-65

ACCESSION NR: AT4046863

ENCLOSURE: 02

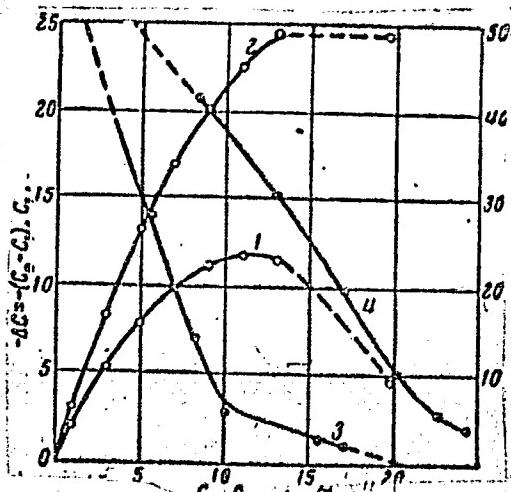


Fig. 2. Concentration relationships of ΔC , C_1 , $\gamma(C_1)$, $\delta(C_1)$ for Cu-Al alloys (Curves numbered as in Fig. 1.)

4/4

Card

ALEKSANDROV, I.A.; SHEYNMAN, V.I.; KOGAN, Yu.S.; SHVETS, Ye.M.;
Prinimali uchastiye; VC1'SHANCK, Yu.Z.; LIZUNKOV, V.P.;
SEREGINA, A.P.; KAZAKOVA, L.I.; MUSATOVA, Z.D.

Hydrodynamics of plates made of S-shaped elements. Khim.
i tekhn.topl.i masel 6 no.7:38-44 Jl '61. (MIRA 14:6)

1. Giproneftemash.
(Plate towers)

FERTMAN, G.I.; VOL'SHANSKIY, M.I.

Production of feeds enriched with vitamin B₁₂ from distilling wash (survey). Spirt.prom. 26 no.1:34-35 '60.
(MIRA 13:6)
(Distilling industries--By-products)
(Feeding and feeds)

FERTMAN, G.I.; VOL'SHANSKIY, M.I.

Fermenting action of fungal amylase on starch (from "Die Branntweinwirtschaft," no.23, 1959). Spirt.prom. 26 no.6:45 '60.

(MIRA 13:11)

(Amylase)

(Starch)

FERTMAN, G. I.; VOL'SHANSKIY, M. I.

Using grain and potato residual wash as a culture
medium for microorganisms producing vitamin B₁₂. Spirt.
Spirt.prom. 26 no.4:34-37 '60. (MIRA 13:8)
(Cyanocobalamin)
(Bacteriology--Cultures and culture media)

VOL'SHANSKIY, M.I.; KOPYLOVA, A.M.

Out session of the Scientific Council of the Central
Scientific Research Institute of the Alcohol and the
Liqueur and Vodka Industries. Spirt.prom. 26 no.4:
44-45 '60. (MIRA 13:8)
(Distilling industries—Congresses)

VOL'SHANSKIY, M.I.; KOPYLOVA, A.M.

All-Union Seminar on new types of production. Spirt.
prom. 26 no.5:46 '60. (MIRA 13:7)
(Distilling industries)

VOL'SHANSKIY M.I.
PEKMAN, G.I.; VOL'SHANSKIY, M.I.

Production of ethyl alcohol in the U.S.A. Spirit. prom. 24 no.2:
34-35 '58. (MIRA 11:3)
(United States--Ethyl alcohol)

V.L. VOL'SHANSKIY, M.I.
FERTMAN, G.I.; VOL'SHANSKIY, M.I.

Electronic eyes inspect drinks (from "Electronic Industries and Tele-Techn., 58 no.2 1957). Spirt.prom. 23 no.8:31 '57.

(MIRA 11;1)

(Bottling) (Photoelectric cells)

"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9

FERTMAN, G. I.; VOL'SHANSK IY, M. I.

Apparatus for producing yeasts. Spirt. prom. 26 no. 3:32-35 '60.
(MIRA 13:10)
(France--Yeast)

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9"

BEM, Rudolf [Böhm, Rudolf]; PLEVA, Vladimir; VOL'SHANSKIY, M.I.
[translator]; TINYAKOV, G.C., doktor biol. nauk, prof.
red.; TSIPERSON, A.L., red.

[Microscopy of meat and raw material of animal origin.
Translated from the Czech] Mikroskopiia miasa i syr'ia
zhivotnogo proiskhozhdeniya. Izd.2., perer. i dop. Mo-
skva, Pishchevaia promyshlennost', 1964. 334 p.
(MIRA 18:3)

"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9

VOLSHENSKIY, A.V., prof. doktor tekhn. nauk; TIRANOVA, T.M., inzh.; VINOGRADOV,
B.N., inzh.

Sulfate resistant cements from slag of electrophosphorous production.
Stroi.mat. 10 no.8:26-28 Ag '64. (MIRA 17:12)

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9"

02411-67 EWT(1)/T WR/GD/JXT

ACC NR: AT6022332

SOURCE CODE: UR/0000/66/000/000/0026/0033

54
B+1AUTHOR: Shubarin, Yu. V.; Gorobets, N. N.; Voloshin, V. A.

ORG: None

25B

TITLE: Effect which reflections in elliptically polarized antennas have on the polarization of their field of radiation

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966. Sektsiya antennykh ustroystv. Doklady. Moscow, 1966, 26-33

TOPIC TAGS: circularly polarized antenna, electromagnetic wave reflection, antenna polarization

ABSTRACT: The authors consider reflections in elliptically polarized antennas and their effect on deviations in the polarization of the field radiated by the antenna from the theoretical value. Antennas with phasing sections in the feeder channel are considered. The phasing section is an anisotropic medium where the rate of propagation of electromagnetic waves depends on polarization and differs for the mutually perpendicular components. This section splits an incident linearly polarized wave into two orthogonally polarized components which are propagated at different velocities so that they are shifted in phase by a given angle at the output of the section resulting in an elliptically polarized field.

Card 1/2

L 02411-67

ACC NR: AT6022332

Formulas are given for determining the effect which reflections from the exciter aperture have on polarization of the radiated field and it is shown that the coefficient of ellipticity is considerably reduced by these reflections in the case of waveguide radiating elements. This effect is insignificant for horn radiators. Variations in the polarization of the field emitted by the antenna are also considered from the standpoint of reflector-exciter interaction. It is found that this type of interaction causes a considerable reduction in the coefficient of ellipticity for the entire antenna when the phasing section is adjusted for circular polarization in free space. This effect may be used if elliptical polarization is necessary in the center of the antenna aperture for producing a circularly polarized field at the principal maximum of antenna radiation since the directional diagram for the exciter is ordinarily not identical with respect to components and the amplitude distributions with respect to components differ at the aperture. Orig. art. has: 3 figures, 15 formulas.

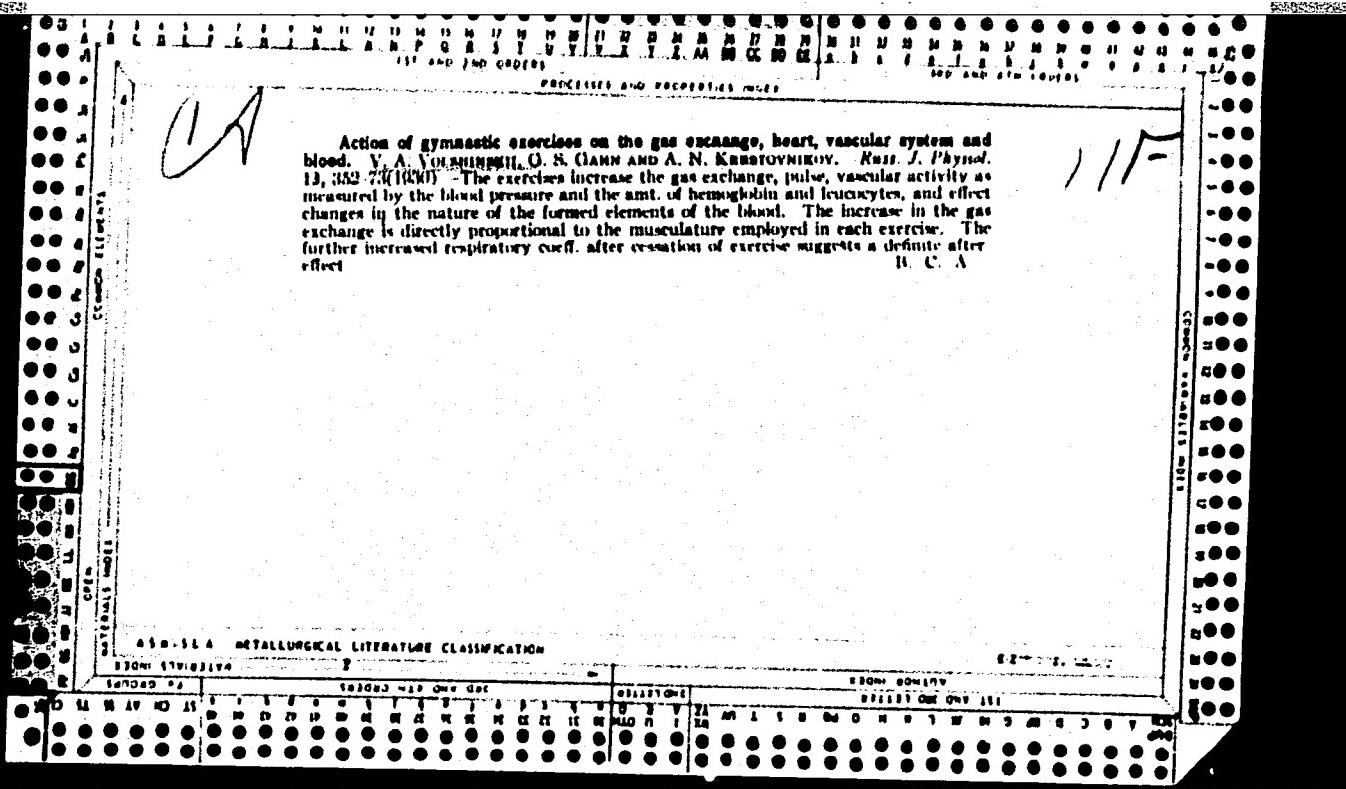
SUB CODE: 20/ SUBM DATE: 22Mar66/ ORIG REF: 002

Card 2/2 hs

GOLUB', N.S.; VOLSHINA, R.K.

Industrial accidents in building the Leningrad subway. Zdrav.
Ros. Feder. 6 no.1:21-25 Ja '62. (MIRA 15:3)

(LENINGRAD--SUBWAYS)
(LENINGRAD--BUILDING--ACCIDENTS)



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PROCESSES AND PROPERTIES INDEX

A-3

Discovery of Alkylbenzenes from Oil by Activated gel.
 I. A. Vaynshteyn, V. A. Gusev, and Z. A. Chumakova
 (Nauk. i Tekhnichesk. 1954, No. 1, p. 1-13).—The HgO gel was activated by heating to ca. 300°–350°. The average absorption was 3.0–4 hr. at 220°–250°. The average desorption was 4 wt.-% of $(\text{CH}_3)_2\text{C}_6\text{H}_3\text{CO}_2$ (ca. 1.5 hr.), with a spread of air pressure of 0.01–0.1250 mm. per sec. The gas was recovered (92–94 wt.-%), and the gel regenerated, by heating to 250°–300°; the regenerated gel having somewhat less adsorptive capacity. Ca. Ans. (e)

ABRILLA METALLURGICAL LITERATURE CLASSIFICATION

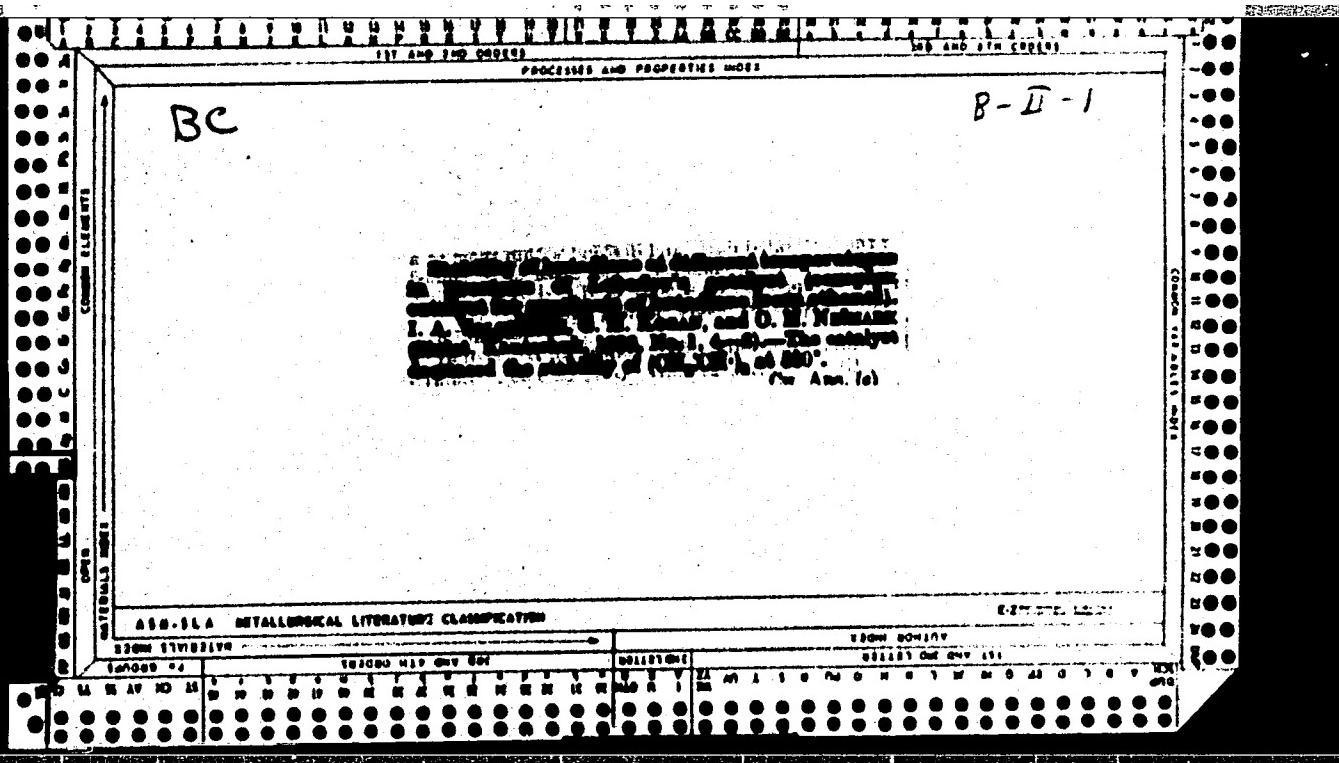
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APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9"

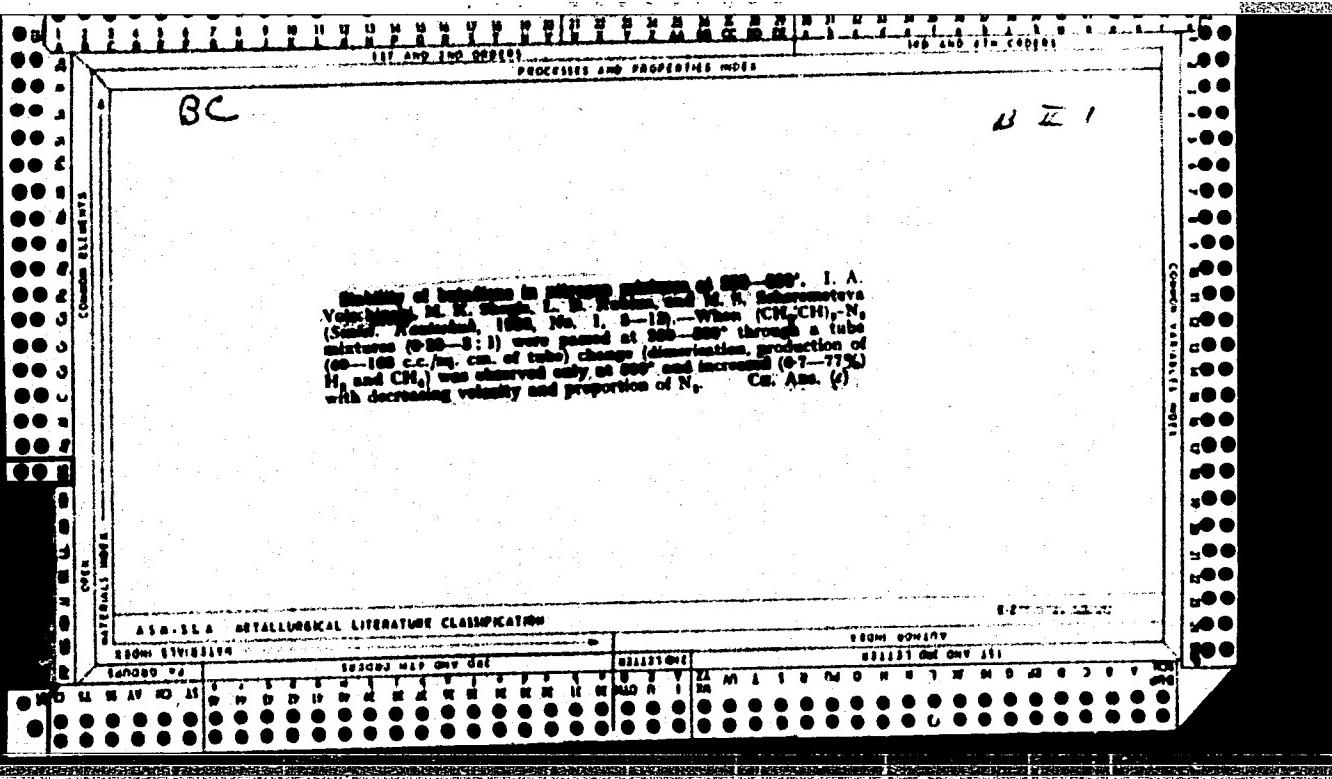
"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9



APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9"

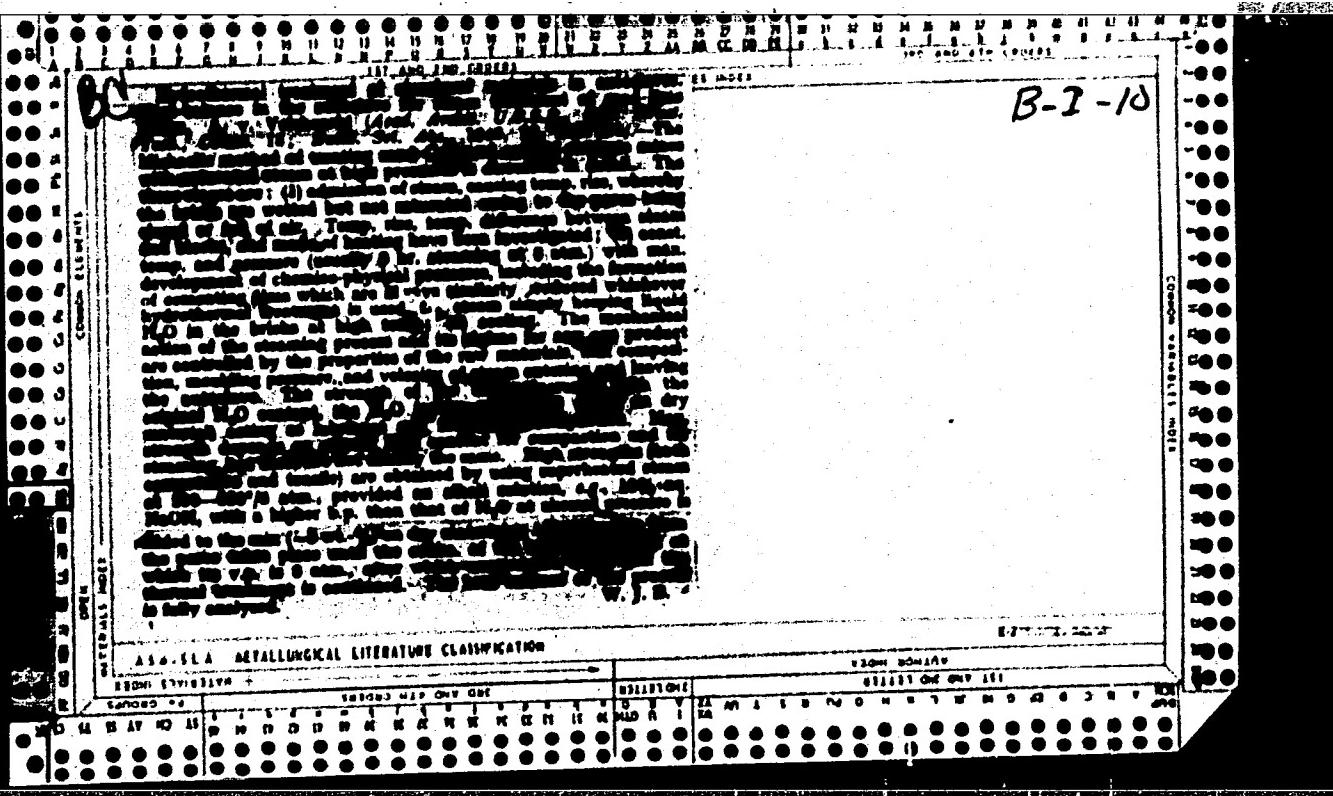


S.C.L.

55 - sigma

Oxidation of synthetic rubber. I. A. VOL'KIN¹ and L. I. LUGINOVA (Kai-huk i Kzina, 1940, No. 4-5, 41-7; Chem. Zentr., 1940, II, 2200; Rev. Gén. Chim., Doc. Anal., 1945, 22, 3).— Sodium butadiene rubber absorbs oxygen at ordinary temperature or at 100° without modification of its mechanical properties. Other tests have been carried out relating to rubber in solution in carbon tetrachloride and to liquid rubber (Divinyl). The addition of oleates of copper, manganese, and cobalt accelerates oxidation. The rubber disintegrates and is transformed into a hard product that can be pulverised and contains 10 to 18% of combined oxygen. 352D21.0632331

1946



DYTNERSKIY, Yu.I.; ALEKSANDROV, I.A.; SHEYNMAN, V.I.; VOL'SHONOK, Yu.Z.;
KUPERMAN, A.M.

Investigating hydraulics and mass transfer regularities in columns with
corrugated downcomerless type plates. Khim.prom. no.1:70-74 Ja '64.
(MIRA 17:2)

SHEYNMAN, V.I.; ALEKSANDROV, I.A.; KOGAN, Yu.S.; VOL'SHONOK, Yu.Z.;
LIZUNKOV, V.P.; SHVETS, Ye.M.

New design of a plate for rectifications columns. Khim.i tekh.
topl.i masel 7 no.5:54-60 My '62. (MIRA 15:11)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut
neftyanogo mashinostroyeniya.
(Plate towers)

"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9

VOLSHOVA, V.A. i PUBTSOV, M.V.

24804. VOLSHOVA, V.A. i PUBTSOV, M.V. Sintez Khinuklidina. Zhurnal Obshchey
Khimii, 1949, Vyp 7, S. 1378-81.—Bibliogr.: S. 1381

SO: Letopis' No. 33, 1949

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9"

*Ca**4***Capacity of the double layer of the mercury electrode**

In dilute solutions of hydrochloric acid and of potassium chloride M. A. Ayres and A. N. Brumfit, *Trans. Faraday Soc.*, 1957, **53**, 24, 418-21 (London English),
of preceding abstract. A comparison of capacity curves for the Hg electrode in 1 N, 0.1 N, 0.01 N and 0.001 N KCl
and in 0.001 N and 0.0001 N HCl salts, where capacity
is plotted against the electrode potential referred to a
normal calomel electrode, with those derived according to
Debye's theory (J. C. A., 19, 770) indicated that the calculated
capacity values have the same general form but are some
what lower than those observed. This deviation shows
that there are also specific attractive forces between the
metallic surface and the ions which do not depend upon
the charge.
George Ayres

ASOL-1A - METALLURGICAL LITERATURE CLASSIFICATION

VOLSHTEYN, L.M.; MOGILEVKINA, M.F.

Chloroplatinates of monomethionine complexes of bivalent platinum.
Zhur. neorg. khim. 10 no.2:542-543 F '65. (MIRA 18:11)

1. Novosibirskiy gosudarstvennyy universitet. Submitted June
10, 1964.

VOLSHTEYN, L.M.; KRYLOVA, L.F.; MOGILEVKINA, M.F.

Reaction of methionine with Reiset's second base chloride. Zhur.
neorg. khim. 10 no.9:1976-1979 S '65. (MIRA 18L10)

1. Novosibirskiy gosudarstvennyy universitet.

Ch

The mechanism of the action of glycine on potassium chloroplatinate (potassium tetrachloroplatinate). A. A. Grinberg and L. M. Volstein. *Comp. rend. acad. sci. U. R. S. S. R.*, 245 N(16 Chernov and V)(1938). K₂PtCl₆ reacts with glycine to form cis and trans isomers of [Pt(NH₂CH₂COO)₂] in the ratio 1:2. This is counter to the usual case where platinum react with NH₃ or amines. If the reaction is carried out in a soln. conta. sufficient alkali to be equiv. to the carbonyl, the ratio of cis to trans forms is 6:1. It is thought that when the reaction takes place without alkali and with heating there is formation of the cis-diglycine along with platoctetraglycine. The latter compd. then when heated in the presence of H₂O is changed totally into trans-diglycine, thus giving a high ratio of trans to cis forms. A mechanism embodying this idea is worked out. The platoctetraglycines were prep'd. C. R. P. Jeffreys

ASM-SEA METALLURGICAL LITERATURE CLASSIFICATION

Complex compounds of bivalent platinum with glycine.
A. A. Grubberg and L. M. Vodkinen, *J. Russ. phys.-chem. Soc.*, 1897, No. 1, 3-23 (in German 21-4); cf. *C. A.* 20, 6647; 21, 3808.

Salts of the type $M_2Pt(NH_3CH_2COO)_4$ were prepd. by addn. of \approx excess of a neutral glycine soln. to K_2PtCl_4 .

In this manner $Ba_2Pt(NH_3CH_2COO)_4$, $Ag_2Pt(NH_3CH_2COO)_4$, and the corresponding NH_4 salts were obtained. Theoretical quantities of inorg. acids added to the above salts yield the complex acid $H_2Pt(NH_3CH_2COO)_4$ in the crystal state. The latter acid exhibits marked amphiphilic properties unlike those of amino acids. A series of salts contg. the cation $[Pt(NH_3CH_2COO)_4]^{2+}$ is described, among which are $[Pt(NH_3CH_2COO)_4](NO_3)_2$, $[Pt(NH_3CH_2COO)_4]Cl_2$, and $[Pt(NH_3CH_2COO)_4]_2(Pt(NH_3CH_2COO))_2$. These salts when treated with H₂O undergo a peculiar change in accord with the equation $[Pt(NH_3CH_2COO)_4]X_2 \rightarrow 2H_2O + H_2Pt(NH_3CH_2COO)_4$. The previously cited bivalent cation behaves as a tetrabasic acid. The values of its acidic dissociations are approx. as follows: $K_1 = 4.0 \cdot 10^{-5}$, K_2 between $4.0 \cdot 10^{-6}$ and $4.7 \cdot 10^{-7}$, $K_3 = 4.0 \cdot 10^{-9}$ and the lower limit of K_4 is 10^{-12} . Aq. solns. of $H_2Pt(NH_3CH_2COO)_4$ on warming decompr. quantitatively into *cis*-diglycine (yield, *cis*-form 85.0% and *trans*-form 4.5%). On warming with KCl a series of increasing KCl content the acid undergoes pro-

gressive change with an increasing yield of *trans*-diglycine and a decreasing yield of the *cis*-form. The latter change is even more marked when HCl solns. are substituted for KCl. Thus in 0.1 N HCl, the yield of *trans*-diglycine is quant. With low HCl concns., the action of the latter is entirely catalytic; however, at higher acid concns. the catalytic effect ceases and the Cl⁻ dets. the compn. of the reaction product. A theoretical interpretation of the transformation of tetraglycine into diglycine derivs. is also included. W. A. Clark

AS-25A - DETACHMENT LITERATURE CLASSIFICATION

137 AND 138 SPOTS		PROCESSES AND PROPERTIES INDEX																	
<p><i>BC</i></p> <p>Complex compounds of aluminum phosphates with boron, A. A. Gerasimov, and I. M. Vassilenko, Russ. Acad. Sci., U.S.S.R., 1957, 3-24. - Complex compounds of phosphorus (MG) yield $K_3[PM_2]$, $K_2[PM_2]$, $K_2[PM_2]_2$, $[P(M_2)_2]_2$, $[P(M_2)_2]_3$, and Al_2 salts from $Ca_3(PO_4)_2$, $(K_2O)_2(NH_4)_2$, and Al_2 salts. In addition with HCl or HNO_3, (1) has markedly complex properties, the series (1) $\rightarrow [P(M_2)(MG)]^+$ $\rightarrow [P(M_2)(MG)_2]^+$ $\rightarrow [P(M_2)(MG)_3]^+$ $\rightarrow [P(M_2)(MG)_4]^+$ being observed by varying the pH of the solution. The salts $[P(M_2)(MG)]^+$ ($Z_2 \sim 600$), $[P(M_2)_2]^+$, $[Mg_2]$, and $[SO_4]^-$ are formed from (1) and the appropriate acids. (1) yields salts of $P(M_2)$ with heating H_2O, and mainly $Al_2P(M_2)O_5$ with 1N-HCl. The mechanism of the reactions is discussed. R. T.</p>		<p><i>a 3</i></p>																	
AER-SEA METALLURGICAL LITERATURE CLASSIFICATION																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: left; padding-bottom: 2px;">140089 TA</td> <td colspan="2" style="text-align: right; padding-bottom: 2px;">140089 MAY ONE ONE</td> </tr> <tr> <td colspan="2" style="text-align: left; padding-bottom: 2px;">140089 TA</td> <td colspan="2" style="text-align: right; padding-bottom: 2px;">140089 MAY ONE ONE</td> </tr> <tr> <td style="text-align: left; vertical-align: bottom;">140089 TA</td> <td style="text-align: right; vertical-align: bottom;">140089 MAY ONE ONE</td> <td style="text-align: left; vertical-align: bottom;">140089 TA</td> <td style="text-align: right; vertical-align: bottom;">140089 MAY ONE ONE</td> </tr> <tr> <td style="text-align: left; vertical-align: bottom;">140089 TA</td> <td style="text-align: right; vertical-align: bottom;">140089 MAY ONE ONE</td> <td style="text-align: left; vertical-align: bottom;">140089 TA</td> <td style="text-align: right; vertical-align: bottom;">140089 MAY ONE ONE</td> </tr> </table>				140089 TA		140089 MAY ONE ONE		140089 TA		140089 MAY ONE ONE		140089 TA	140089 MAY ONE ONE						
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PROPERTIES AND PROPERTIES INDEX

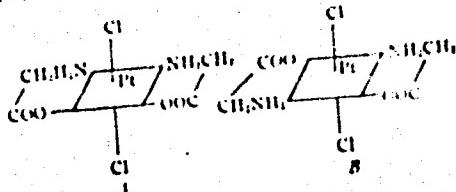
Compounds of bivalent platinum with α -alanine.
A. A. Grinberg and L. M. Volstein. *Hull. Acad. sci. U. R. S. S., Classe sci. math. nat. Sci. chim.* 1937, 885-903 (in German 903-6); cf. *C. A.* 31, 7351; 37, 1290; 39, 6460; 31, 7351¹. Compds. first studied by Ley and Picken (*C. A.* 6, 207) included those of α -alanine and glycine. The Pt salt of alanine, PtAn, is obtained in 65% theoretical yield by the reaction: $K_2PtCl_6 + 2AnH \rightarrow PtAn + 2KCl + 2HCl$. The yield could be raised by concn. of filtrate but at the expense of purity. The trans isomer is formed; the cis isomer could not be obtained. PtAn is obtained by adding K_2PtCl_6 to AnH soln. in NaOH, heating the mixt., and adding H_2SO_4 and $KMnO_4$ to the $(Pt(AnH)_2)Cl_6$ formed. PtAn is very hygroscopic and could not be obtained as a solid. The mixed salt of alanine and glycine, PtAnGly, is prep'd. as follows: $K_2PtCl_6 + GlyH \rightarrow PtAnGly + KCl + HCl$. GlyH should be 4 times the theoretical quantity. Yield 75-80% theoretical. $PtCl_3(AnH)_2$ and $PtCl_3(AnH)(GlyH)$ are obtained at 90% theoretical yield by adding concd. HCl to PtAn or PtAnGly. $(Pt(S:C(NH_2)_2)_2(AnH)_2)Cl_6$ and $(Pt(S:C(NH_2)_2)_2(AnH)_2)Cl_4$ are obtained at 65-70% theoretical yield by adding $S:C(NH_2)_2$ to $PtCl_3(AnH)(GlyH)$ or $PtCl_3(AnH)_2$. They are very hygroscopic but after prolonged drying over P_2O_5 are found to contain 2H₂O of crystn. PtAn(NH₂)₂ and PtAnGly(NH₂)₂ are obtained by adding NH₂ to PtAn or PtAnGly at 70-80% theoretical yield. Both are highly sol. in water. V. A. Kalkhevsky

ATA-SLA METALLURGICAL LITERATURE CLASSIFICATION

111 AND 200-000186

PROCESSES AND PROPERTIES INDEX

The action of glycine on potassium chloroplatinate. A. A. Grinberg and I. M. Volshtein. *Bull. Acad. N. R. S. S. classe sci. chim.* 1941, 281 (in German 389).—Glycine (2.2 g.) in 30 cc. H₂O was treated, with heating, with 1.2 g. K₂PtCl₆. The mix. was heated on a steam bath for 1.25–1.5 hrs. Immediately upon mixing, the soln. became almost red then faded to a greenish yellow. After the heating period the soln. was allowed to crystallize for several days, two fractions being collected. The 2 fractions had the same compn.: PtGlyCl₄(Cl = HNC(=O)COO). The total yield approached 45–50%, with approx. 10% being lost in soln. The two fractions differ somewhat in their cryst. form and in chem. behavior. The 1st fraction (I) heated with concd. HCl dissolved very slowly on boiling with excess HCl, yielding on cooling yellow crystals of Pt(Gly)₂Cl₄. The 2nd (II) fraction heated with concd. HCl dissolved rapidly and did not crystallize on cooling. Reduction of I by K oxalate was slow and yielded *trans*-Pt(Gly), while II reacted rapidly yielding *cis*-Pt(Gly). The *cis* structure (A) of II and the *trans*



(*cis*-PtCl₄). Pt(Gly)₂Cl₄ is apparently formed by breaking of the glycine complex ring with liberation of the COOH group and introduction of Cl atoms into the complex at the points of attachment of the COO groups. The product is a dibasic acid, which can be titrated. Addn. of AgNO₃ gives a yellow ppt., apparently of Ag₂(PtGly)₂Cl₄, which on treatment with HNO₃ yields AgCl and PtGlyCl₄.

G. M. Kosolapoff

ASME-LA METALLURGICAL LITERATURE CLASSIFICATION

FROM STANDARDS

STANDARDS

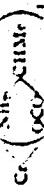
STANDARDS

STANDARDS

6

Dinuclear internal complex salt of chromium and glycine, and the products of its reaction with hydrochloric acid. I. M. Vishnevskii, *Vseross. Inst. Chem. Tech. Kompl. Tsvet. Metal. Akad. Nauk S.S.R.* 48, 111-114 (1958); *Holloway Akad. Nauk S.S.R.* 48, 111-114 (1958). CrCl₃O₂(I) (in which Cr represents HgCl₂CO₃) was prepd. according to Chugayev and Sretin (C.A. 51, 1401). Treated with 1 mol. HCl it forms [CrGly]₂Cl₂, very hygroscopic, sol. in H₂O, insol. in R(OH). With 2 mols. HCl, I forms [CrGly]₂Cl₂·H₂O·Cl₂, green needles, very hygroscopic, sol. in H₂O and in R(OH). With 3 mols. HCl, I forms Cr(HGly)₂Cl₂, green, hygroscopic, and sol. in H₂O and R(OH). These reactions lead to the conclusion that I is a dinuclear complex corresponding to double the empirical formula. Frank Gonet

Trisubstituted derivatives of chromium. I. J. Gras, U. S.S.R., No. A.I. 2148-53 (1947) (in Russian); C. A. 41, 5026-2. In the complex $[Cr(NH_3)_5CO_3]^{2+}$, where one NH_3 group occupies 2 coordination places, being bound to Cr by both the CO_3 and the NH_3 group.



Action of this acid splits progressively 1, 2, and 3 $Cr-O-CO_3$ bonds, resulting in a series of compounds $[Cr(NH_3)_5(Cr(OH_2)_2CO_3)]^{2+}$ (where X is a radical). This series represents a gradual transition from a "complete inner complex" with all 6 coordination places occupied by cycles to a noncyclic fragment (where each NH_3 is coordinated with Cr only through NH_3), over a partial inner complex. Transitions in this series are reversible, each bringing about gradual opening of the six rings to $Cr(H_2O)_5$, alkali acting in the opposite direction. Transformation in the 1st direction was effected by short (10 min.) heating with the stoichiometric amount of 0.1 N-HCl, followed by evaporation to dryness; the example, highly soluble in H_2O , are obtained in well-formed crystals and show the color: $[Cr(NH_3)_5]^{2+}$ (green), $[Cr(NH_3)_4(Cr(OH_2)_2CO_3)]^{2+}$ (purple-red), $[Cr(NH_3)_3(Cr(OH_2)_2CO_3)]^{2+}$ (red), $[Cr(NH_3)_2(Cr(OH_2)_2CO_3)]^{2+}$ (orange-red), $[Cr(NH_3)(Cr(OH_2)_2CO_3)]^{2+}$ (yellow-orange), and $[Cr(NH_3)_5H_2O]^{2+}$ (yellow). An aqua solution of $[Cr(NH_3)_5]^{2+}$ is originally light green, turns gradually purple, particularly rapidly in alk. soln., and on heating, in 1-2 min. on heating, $[NH_3]^{2+}$ splits. $[Cr(NH_3)_5]^{2+}$ reacts from $[Cr(NH_3)_5CO_3]^{2+}$ somewhat more slowly. From $[Cr(NH_3)_5CO_3]^{2+}$, however, first an aqua salt of $[Cr(OH_2)_2CO_3]^{2+}$ (Cr, signature pink), takes place only after preliminary heating. The latter monohydrate in contact with 10% HCl is slowly transformed into a salt of $[Cr(OH_2)_2CO_3]^{2+}$; this does not take place with either the dichloride or the trichloride. The dry complex without solvent decomposes on prolonged heating to 130-40°.

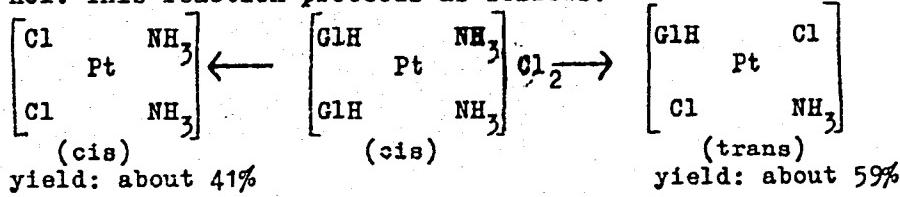
A14-35-A RETAILORING LITERATURE CLASSIFICATION

5.2620

5(2)

68105
SOV/78-5-1-7/45AUTHORS: Volshteyn, L. M., Volodina, I. O.TITLE: New Data on the Complex Compounds of Bivalent Platinum With GlycocollePERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 1, pp 35 - 38
(USSR)

ABSTRACT: The cleavage of mixed tetrammine $cis-[Pt(GlH)_2(NH_3)_2]Cl_2$ under the action of HCl has not yet been investigated (GlH = glycocolle, Gl = glycocolle ion). The authors prepared $cis-[Pt(GlH)_2(NH_3)_2]Cl_2$ (already described by A. A. Grinberg and B. V. Ptitsyn (Ref 3)) from $cis-[PtGl_2]$. The first-mentioned compound was cleaved with HCl. This reaction proceeds as follows:



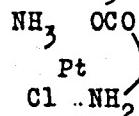
Card 1/2

New Data on the Complex Compounds of Bivalent Platinum
With Glycocolle

68105

SOV/78-5-1-7/45

Titration of the resulting trans-[Pt(GlyNH₃)Cl₂] with KOH yielded the soluble salt K[PtGlyNH₃Cl₂]. If the solution of this salt is allowed to stand for 24 hours, the nonelectrolyte PtGlyNH₃Cl is precipitated which has the cyclic structure



A comparison of the Pt(II) complexes investigated earlier with α -aminobutyric acid and ϵ -aminocaproic acid shows that Pt and amino acid can be more easily separated in the case of α -amino acids than in the case of ϵ -amino acids. There are 14 references, 12 of which are Soviet.

ASSOCIATION: Dnepropetrovskiy khimiko-tehnologicheskiy institut im. F. E. Dzerzhinskogo (Dnepropetrovsk Institute of Chemical Technology imeni F. E. Dzerzhinskogo)

SUBMITTED: September 1, 1958
Card 2/2

VOLSHTEYN, L. M.

"Complex Compounds of Trivalent Chromium With the Simplest Amino Acids." Sub 14 Mar 51, Inst of General and Inorganic Chemistry imeni N. S. Kurnakov, Acad Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

D. V. Shul'gin

VOLSHTEYN, L.M.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Inorganic Chemistry

(O chem)
A new class of complex compounds of chromium with
amino acids. L. M. Volshtein. Bull. Acad. Sci. U.S.S.R.,
Div. Chem. Sci. 1952, 260-77 (Engl. translation). See
C.A. 46, 100364. H. L. H.

92-54
ggp

VOLSHTEYN, L.M.

Reaction of trivalent-chromium salts with glycol and alanine.
Izv. Sekt. plat. i blag. met. no. 27:20-32 '52. (MLRA 7:5)
(Chromium organic compounds) (Glycol) (Alanine)

VOLSHTEYN, L.M.

Action of acids on intracomplex compounds of trivalent chromium with
glycol and alanine. Izv.Sekt.plat. i blag.met. no.27:33-46 '52.
(MLRA 7:5)

(Chromium organic compounds) (Glycol) (Alanine)

VOLSHTEYN, L.M.; BAVRIN, A.P.

Electric conductivity of glycol complex chromium compounds. Izv. Sekt.
plat.i blag.met. no.27:47-61 '52. (MLRA 7:5)

1. Institut obshchey i neorganicheskoy khimii Akademii nauk SSSR.
(Chromium organic compounds)

VOLSHTEYN, L. M.

USSR

Two modifications of potassium diglycinosixalatochromate.

L. M. Volshtein and V. P. Makarova [Chem. Technol.

Institut Zidkrovskogo Dostizheniya Nauk SSSR]

193, 470-82 (1963); cf. C.A. 46, 10036h.—Treatment of concd. soln. of $[Cr(GH)_2OC_2O_4]$ or $[Cr(GH)_2CO_4]$ (where G = glycine unit) with 0.8 mole KOH soln., boiling, and evapn. gave a glassy mass; after soln. in 2-4 ml. cold H₂O it slowly deposited a pink ppt. of K[CrG₂O₄], which was dried at 110-15°. When this was taken up in boiling H₂O, evapd. on a steam bath, the residue dried at 110-15°, and ground, there was formed a violet modification of the same compn. In NH₄OH neither yields a ppt. of Cr hydroxide, nor does aq. soln. of CuCl-AcONa give a Cu oxalate ppt. in the cold; the latter forms slowly on boiling. Molar cond. of the pink salt is 08.8 ohm⁻¹ cm.² at 0.01M and 09.2 at 0.025, while for the violet form these are 10.3 and 09.4, resp. The pink salt is cryst. and anisotropic; the violet form appears to be amorphous and glassy. The violet form is readily sol. in H₂O; the pink form slowly changes into the violet in aq. soln. and is very much less sol. Addn. of EtOH or Me₂CO to freshly prep'd. aq. soln. of the pink form immediately gives a ppt. of the original salt; the violet form yields only a cloudy soln., from which oil seps. slowly. Cryoscopic detn. of mol. wt. gave 310-18 for the pink salt and the violet salt. Addn. of EtOH or Me₂CO to concd. aq. soln. of the violet form yields a viscous oil, which on drying reverts to the violet salt. The two forms appear to be isomers with possibly different forms of ring closure around the central Cr atom. — O. M. Kosolapoff

VOLSHTEYN, L.M.

GRINBERG, A.A. (Leningrad); BABAYEVA, A.V. (Moscow); YATSIMIRSKIY, K.B. (Ivanovo); GOREMYKIN, V.I. (Moscow); BOLIY, G.B. (Moscow); FIAL-KOV, Ya.A. (Kiyev); YAKSHIH, M.M. (Moscow); KEDROV, B.M. (Moscow); GEL'MAN, A.D. (Moscow); FEDOROV, I.A. (Moscow); MAKSYMUK, Ye.A. (Leningrad); VOL'KENSHTEYN, M.V. (Leningrad); ZHDANOV, G.S. (Moscow); PTTSYN, B.V. (Leningrad); ABLOV, A.V. (Kishinev); VOLSHTEYN, L.M. (Dnepropetrovsk); TROITSKAYA, A.D. (Kazan'); KLOCHKO, M.A. (Moscow); BABAYEVA, A.V.; TRONEV, V.G. (Moscow); RUBINSHTEYN, A.M. (Moscow); CHERNYAYEV, I.I.; GRINBERG, A.A.; TANANAYEV, I.V.

Explanation of the transeffect. Izv. Sekt. plat. i blag. met. no.28:
56-126 '54.

(Compounds, Complex) (Platinum)

VOLSHTEYN, L.M.; BAVRIN, A.P.; MOLOSNOVA, V.P.

Viscosity of aqueous solutions of glycocoll chromium complex compounds.
Izv. Sekt. plat. i blag. met. no. 28:161-165 '54. (MLRA 7:9)
(Viscosity) (Glycine) (Chromium organic compounds) (Compounds,
Complex)

VOLSHTEYN, L. M.

USSR/Chemistry - Complex compounds

Card 1/1 Pub. 22 - 16/40

Authors : Volshteyn, L.M., and Motyagina, G.G.

Title : Complex chromium - beta-aminopropionic acid compounds

Periodical : Dok. AN SSSR 99/3, 399-402, Nov 21, 1954

Abstract : The derivation of numerous non-cyclic compounds of chromium with amino-acids is announced. Some of these non-cyclic compounds were obtained through direct addition of corresponding amino acids to chromic chloride. It was established that such compounds contain coordinated glycol or alanine molecules and are quite strong acids. The effect of alkalis on the separation of the protons from the coordinated amino acid molecules and origination of certain radicals, which close the cycle with the formation of internal complex salts, is discussed. The effect of alkali on non-cyclic compounds is explained. Five references: 4-USSR and 1-German (1906-1952).

Institution: The F.E. Dzerzhinskiy Chemical-Technological Institute, Dnepropetrovsk

Presented by: Academician I.I. Chernyaev, June 24, 1954

Volshteyn, L.M.

USSR/ Chemistry - Inorganic chemistry

Card 1/1 Pub. 116 - 5/29

Authors : Volshteyn, L. M., and Kocherga, N. M.

Title : Oxalate-dibioxalate-glycino-potassium chromiate

Periodical : Ukr. khim. zhur. 21/6, 710-713, Dec 1955

Abstract : Investigation was made to determine the effect of KOH on a certain complex acid of the composition: $[\text{Cr}(\text{NH}_2\text{CH}_2\text{CO}_2\text{H})_2\text{H}_2\text{O}(\text{C}_2\text{O}_4\text{H})_3]$. The synthesis of an oxalate-dibioxalate-glycino-potassium chromiate salt in a complex anion the Cr of which is bound with one glycocoll radical, one C_2O_4 radical and two $\text{C}_2\text{O}_4\text{H}$ radicals, is described. The chemical properties of the salt and its formula are listed. Five USSR references (1931-1955).

Institution : Dnepropetrovsk Chemicotechnological Inst. im. F. Ye. Dzerzhinskiy

Submitted : December 20, 1954

VOLSHTEYN, L.M.

Molecular weight of dipyridoquochromium chloride

In aqueous solutions. L. M. Volshteyn, Izvest. Sektora

Platiny i Drug. Biologich. Katal. Inst. Oshchel. i Neorg.

Khim., Akad. Nauk S.S.R., No. 29, 107-12 (1958).

Cryoscopic measurements of freshly prep'd. aq. solns. (0.1-
0.5M) of Cr[(N₃CH₂CO₂H)₂O]₂Cl revealed that the
compd. undergoes polymerization, followed by partial de-
polymerization. For example, 0.1M soln. gave the mhd.
wt. of the salt at the start of the expt. as 368, and after one
month it changed to a const. value of 260. However, the
initial mol. wt. of 603 in the instance of 0.5M soln. de-
creased after one month and remained unchanged at 328.

A. P. Kotloby

"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9

VOLSHTEYN, L M -

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9"

VOLSHTEYN, L.M.

Closure of chromium-glycocol cycles. Part 1. Izv.Sekt.plat.i blag.
(MLRA 9:5)
met. no.31:101-106 '55.
(Glycine) (Chromium compounds)

VOLSHTEYN, L.M.

Closure of chromium-glycocol cycles. Part 2. Izv.Sekt.plat.i
(MLRA 9:5)
blag.met. no.31:107-112 '55.
(Glycine) (Chromium compounds)

VOLSHTEYN, L.M.; MOGILEVSKINA, M.P.
~~APPROVED FOR RELEASE: 08/09/2001~~ CIA-RDP86-00513R001860720017-9"

Effect of alkalies on chromium oxalatoglycinoglycine. Izv.Sekt.plat.
i blag.met. no.31:113-119 '55.
(MLRA 9:5)
(Chromium compounds) (Alkalies)

VOLSHTEYN, L. M.

Inner complex salt of bivalent platinum with 3-aminopropionic acid. L. M. Volshteyn and M. E. Mogilevskaya
(U.S.S.R. Chem. Technol. Inst., Dognopetrovsk). *Doklady Akad. Nauk S.S.R.*, 104, 418-21 (1955).—Heating 0.001 mole K_2PtCl_6 , 0.018 mole $H_3NCH_2CH_2CO_2H$, and 0.003 mole KOH in an 0.8M soln. 6 hrs. on a steam bath, adding 15 ml. concd. HCl, refluxing 10 min., and cooling yielded a ppt. of yellow $[Pt(H_3NCH_2CH_2CO_2H)_2Cl_2]$, (I), sparingly sol. in cold H_2O , acidic to methyl orange, and giving a turbidity with cold $AgNO_3$, and a ppt. on boiling. I can be titrated with base and phenolphthalein indicator. Titration of I with 0.1M KOH in the cold gave colorless $[Pt(H_3NCH_2CH_2CO_2)]$, (II), a betaine. II in 0.001M soln. at 25° has a molar cond. of $0.1\text{ ohm}^{-1}\text{sq. cm.}$, confirming the inner complex structure of a nonelectrolyte. II with hot 1:1 HCl gave I. Both I and II were homogeneous. Thiourea treatment of I gave 87% colorless $[Pt(H_3NCH_2CH_2CO_2H)_2CSN_2H_4]Cl_2H_2O$, (III), indicating the trans-structure of I. I with hot concd. NH_4OH gave colorless $[Pt(H_3NCH_2CH_2CO_2)(NH_3)_2]$, which with concd. HCl formed colorless $[Pt(H_3NCH_2CH_2CO_2H)(NH_3)_2]Cl_2$, readily titrating with $AgNO_3$; excess HCl gave 52% yellow $[Pt(NH_3)_2Cl_4]$, again confirming the trans-structure of I. Hence II also has the trans-structure. III titrated with 0.1M KOH gave colorless $[Pt(H_3NCH_2CH_2CO_2)Cl(CSN_2H_4)]$, mol. cond. at 25° $2.6\text{ ohm}^{-1}\text{sq. cm.}$ at 25° in 0.0005M soln. G. M. Kozlandoff

VOLSHTEYN, L. M.

Complex compounds of bivalent platinum with tyrosine.
L. M. Volshteyn and N. S. Velikanova (F. B. Dzerzhinskii
Chim.-Tekhnol. Inst., One prospettov), Zdr. Neorg.
Khim. 1, No. 1, 48-52 (1955).—Aq. KOH (12 n. molar, 0.33 l.)
and equiv. tyrosine were heated and treated with 3 mmoles of
 K_2PtCl_4 for 2 hrs. Excess undissolved tyrosine (approx.
0.5 g.) was filtered off. The filtrate was boiled and 2-3
drops of concd. HCl added. More amorphous tyrosine was
pptd. Further addn. of concd. HCl (2-3 ml.) pptd. an op-
precipitable quantity of dark-brown viscous mass (I), which was
allowed to settle. The decanted supernatant liquor was
filtered and treated with excess concd. HCl (2-6 ml.), and
boiled 2-3 min. On cooling, a yellow cryst. ptnt. (II)
formed. After filtering, washing with H_2O , $RtOH$, and
 Rt_2O , it was shown by Pt and Cl analyses to correspond to
platinum dichloro-dityrosine, $C_11Pt(NH_3CH_2COO)_2CH_2$
 $(C_6H_5OH)_2$, with coordinate bonding postulated between the
Pt and the two N atoms. The yield was equiv. to about
20% of the original K_2PtCl_4 . On treating II with KOH in
the cold, or, more rapidly hot, a ppt. of platinum dityrosinateammine,
 $Pt[NH_3CH_2COO]CH_2CH_2OH_2$, is formed. A ring struc-
ture is proposed in which the Pt is linked to the COO group
and (by coordinate linkage) to the NH₃ group. When 0.6
g. of II is dissolved in 5 ml. of concd. aq. NH₃, and boiled
for 2 min. and then cooled, platinum dityrosinateammine,
 $(NH_3)_2Pt[NH_3CH_2COO]CH_2CH_2OH_2$, is obtained. It may
consist of complex compds. of K with Pt, Cl, and tyrosine.

C. H. HUGHES

PMA

"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9

Von Stein, L.M.

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9"

*DISCUSSION OF THE WORK OF VOLSHTEIN AND MOGILEVSKA
TO THAT OF I. THE STRUCTURES OF Cr COMPLEXES WITH LARG*

H. Fuchsman

VOLSHTEIN, L.M., MOGILEVSKA, M.F.
The Complex Compounds of Bivalent Platinum with Amino- ϵ -Capric Acid
(Komplekksnyye soyedineniya dvukhvalentnoy platiny s ϵ -aminozaprinovoy
kislotcy, Russian)
Doklady Akademii Nauk SSSR, 1957, Vol 114, Nr 1, pp 99-101
(U.S.S.R.)

Recently the same authors described the compounds of the bivalent platinum (Pt^{2+}) with β - and γ -aminoacids (with β -alanine and β -H and γ -aminobutyric acid - γ H). In this connection it is of particular interest to note that the authors succeeded in obtaining Cis- and Trans-isomers of the compound $[Pt(\beta H)_2 Cl]$ and platinates with the isomeric (cis- and trans-) catiodes $[Pt(\epsilon H_2)_2 (NH_3)_2]^{2+}$.

a) Cis-dichloride: found %: Pt 25.66; 36.82; 37.03; N 5.16
b) Trans-dichloride: found %: Pt 36.86; 37.03; Cl 13.65; N 5.35
c) Platinite: (cis structure) found %: Pt 47.09; 47.27;

⁴⁷; N 5.70; H 0.25

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SUB:
AVAI:
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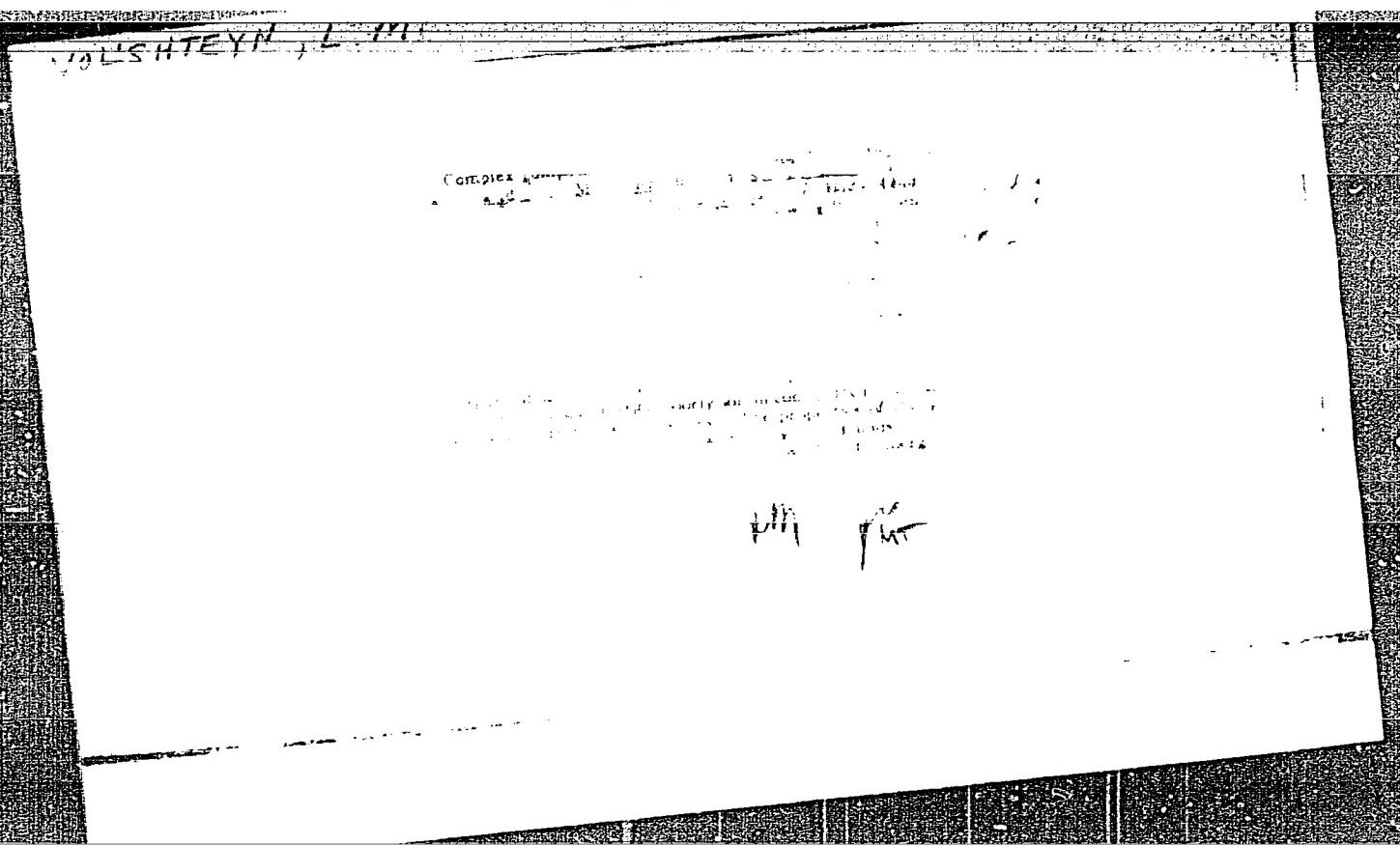
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CIA-RDP86-00513R001860720017-9"

Vol Sh 74 May 19

20-1-12/64

AUTHOR:

VOLSHTEIN, L.M., NOGILEVSKA, M.F.

TITLE:

The Complex Compounds of Bivalent Platinum with Amino- ϵ -Cyclic Acids
(Kompleksnye soyedineniya dvukhvalentnoy platiny s ϵ -amino ϵ -ciklicheskimi kislotami, Russian)

PERIODICAL:

Doklady Akademii Nauk SSSR, 1957, Vol 114, Nr 1, pp 99-101
<<<<<<>>>

ABSTRACT:

Recently the same authors described the compounds of the bivalent platinum (Pt^{2+}) with β - and γ -aminoacids (with β -alanine and γ - β -H and γ -aminobutyric acid - γ H). In this connection it is of particular interest to note that the authors succeeded in obtaining Cis- and Trans-isomers of the compound $[Pt(\gamma H)_2 Cl]$ and platinites with the isomeric (cis- and trans-) cationes $[Pt(\gamma H_2)_2 (NH_3)^2]^{2+}$.

The isomeric compounds:

- a) Cis-dichloride: found %: Pt 25,66; 36,82; 37,03; N 5,16
- b) Trans-dichloride: found %: Pt 36,86; 37,03; Cl 13,65; N 5,35
- c) Platinite: (cis structure) found %: Pt 47,09; 47,27; Cl 17,17; N 5,70; H 0,25

Card 1/2

20-1-27/64

The Complex Compounds of Bivalent Platinum with Amino- ϵ -Capric Acid.

d) Platinite (trans structure) found %; Pt 47,01; 47,17;
Cl 17,48; N 6,60; H 0,25.

ASSOCIATION: Not given

PRESENTED BY:

SUBMITTED:

AVAILABLE: Library of Congress

Card 2/2

"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9"

VOLSHTEYN, L.M., MOGILEVSKA, N.F.

Two isomers of chloroaminoethionine plastoehi-ope. Dokl. Akad. Nauk
163 no.6:1385-1388 Ag '65. (MIRA 18:8)

1. Novosibirskiy gosudarstvennyy universitet. Submitted February 4, 1965.

VOLSHTEYN, L.M., doktor khim. nauk, prof.

Boris Vladimirovich Ptitsyn; on his sixtieth birthday. Izv.
SO AN SSSR no.3 Ser. khim. nauk no.1:163-165 '63. (MIRA 16:8)

(Ptitsyn, Boris Vladimirovich, 1903-)

VOLSHTEYN, L.M.; ANOKHOVA, L.S.

Complex compounds of bivalent platinum with leucine. Zhur.neorg.khim.
8 no.9:2053-2058 S '63. (MIRA 16:10)

1. Novosibirskiy gosudarstvennyy universitet i Dnepropetrovskiy
khimiko-tehnologicheskiy institut.

"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9

VOLSHTEYN L.M.

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720017-9"

VOISSTEIN, L.M.; VOLODINA, I.O.

Isomerization of inner complex salts of bivalent platinum with
amino acids. Zhur.neorg.khim. 7 no.12:2685-2688 D '62.
(MIRA 16:2)

1. Novosibirskiy gosudarstvennyy universitet i Dnepropetrovskiy
khimiko-tehnologicheskiy institut imeni F.E.Dzerzhinskogo.
(Platinum compounds) (Isomerization) (Amino acids)

VOLSHTEYN, L.M.

"Basic principles of the chemistry of complex compounds" by
V.A.Golovina, I.A.Fedorov. Reviewed by L.M.Volshtein.
Zhur.neorg.khim. 8 no.1:261-262 Ja '63. (MIRA 16:5)
(Complex compounds) (Golovina, V.A.) (Fedorov, I.A.)

VOLSHTEYN, L.M.; MOGILEVKINA, M.F.

Complex compounds of bivalent platinum with methionine. Zhur.neorg.khim.
(MIRA 16:4)
8 no.3:597-603 Mr '63.

1. Novosibirskiy gosudarstvennyy universitet i Dnepropetrovskiy
khimiko-tehnologicheskiy institut.
(Platinum compounds) (Methionine)

VOLSHTEYN, L.M.; ZEGZHDA, G.D.

Mutual transformation of isomers of platinum divaline.
Zhur.neorg.khim. 7 no.10:2315-2319 0 '62. (MIRA 15:10)

1. Dnepropetrovskiy khimiko-tehnologicheskiy institut imeni
F.E.Dzerzhinskogo.
(Platinum compounds) (Valine) (Isomerization)

L 13014-63

EWT(m)/BDS

AFFTC/ASD/ESD-3

FM/JD

ACCESSION NR: AP3002909

S/0289/63/000/001/0163/0165

AUTHOR: Volshteyn, L. M. (Doctor of chemical sciences, Professor)

53
57

TITLE: Boris Vladimirovich Ptitsy*n

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya khimicheskikh nauk, no. 1, 1963, 163-165

TOPIC TAGS: scientific accomplishments, radioactive strontium, thermal decomposition, divalent platinum, potassium chloroplatinate, oxidation-reduction process, thiosulfate, tetrathionate ions, zirconium, niobium

ABSTRACT: Prof. B. V. Ptitsy*n, the division manager of the Institut neorganicheskoy khimii Sibirskogo otdeleniya AN (Institute of Inorganic Chemistry, Siberian Department, AN) has been honored on his 60th birthday for his numerous accomplishments for which he received several decorations. He developed the thermal decomposition of the ammoniates of divalent platinum and the reaction of potassium chloroplatinate with glycol. He prepared isomers of platinum diglycenes and proved their structure. He wrote a series of articles on the oxidation-reduction processes of platinum metals. This practical accomplishment also has a great theoretical value. He also investigated the reaction of various oxidizers

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ACCESSION NR: AP3002909

on thiosulfate and tetrathionate ions. Furthermore, he investigated the oxidation processes of sulfur-containing compounds and studied in detail anions such as Cr^{sub 2 O sup 2-}, sub 7 and Mn O sup -, sub 4. His second most important work is the investigation of the stability of the complexes in solutions. He developed the method for the determination of the instability constant of the complexes called the method of shifted equilibrium. He made a study of uranium and published numerous investigations of some complex compounds of zirconium and niobium. He introduced a method of removing radioactive strontium from organisms by its adsorption on hydroxylapatite crystals. In addition to all this he worked on many other scientific accomplishments.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 24Jul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 000

OTHER: 000

Card 2/2

VOLSHTEYN, L.M.; ZEGZHDA, G.D.

Complex compounds of bivalent platinum with valine. Zhur.neorg.khim.
7 no.7:1525-1529 Л '62. (MIRA 16.3)

1. Dnepropetrovskiy khimiko-tehnicheskiy institut imeni F.E.Dzerzhinskogo.
(Platinum compounds) (Valine)

VOLSHTEYN, L.M.; MOTYAGINA, G.G.

Interconversions of tetra-, tri-, and diglycine complexes
of bivalent platinum. Zhur.neorg.khim. 7 no.11:2495-2500
N '62. (MIRA 15:12)

1. Dnepropetrovskiy khimiko-tehnologicheskiy institut
imeni Dzerzhinskogo.

(Platinum compounds)
(Glycine)

VOLSHTEYN, L.M.

Boris Vladimirovich Ptitsyn; on his 60th birthday. Zhur. ob. khin.
33 no.3:717-719 Mr '63. (MIRA 16:3)
(Ptitsyn, Boris Vladimirovich, 1903-)

VOLSHTEYN, L.M.; VOLODINA, I.O.

Tetraalanine complexes of bivalent platinum. Zhur.neorg.khim.
7 no.2:252-257 F '62. (MIRA 15:3)

1. Dnepropetrovskiy khimiko-tehnologicheskiy institut imeni
Dzerzhinskogo.
(Platinum compounds) (Alanine)

VOLSHTEYN, L.M.; MOGILEVKINA, M.F.; MOTYAGINA, G.G.

Conversion of cis-diglycineplatinum into a trans isomer. Zhur.
neorg.khim. 6 no.5:1105-1109 My '61. (MIRA 14:4)

1. Dnepropetrovskiy kimiko-tehnologicheskiy institut imeni
F.E.Dzerzhinskogo.

(Platinum compounds)

VOLSHTEYN, L.M.; MOGILEVKINA, M.F.

Inner complex compounds of bivalent platinum with methionine.
Dokl. AN SSSR 142 no.6:1305-1307 F '62. (MIRA 15:2)

1. Dnepropetrovskiy khimiko-tehnologicheskiy institut im.
F.E.Dzerzhinskogo. Predstavлено академиком A.A.Grinbergom.
(Platinum compounds)
(Methionine)

VOLSHTEYN, L.M.; MOGILEVKINA, M.F.; VELIKANOVA, N.S.

New compounds of bivalent platinum with amino acids. Trudy
IKHTI no.6:3-11 '58 (MIRA 13:11)
(Platinum compounds) (Amino acids)

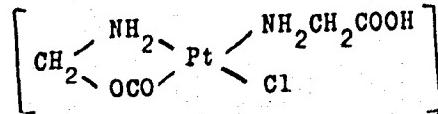
S/078/60/005/009/022/040/xx
B017/B058

AUTHORS: Volshteyn, L. M. and Volodina, I. O.

TITLE: Complex Compounds of Bivalent Platinum With Glycocolle

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 9,
pp. 1948 - 1953

TEXT: The action of HCl on cis-[Pt(NH₂CH₂CO₂H)₂] proceeds gradually. Splitting of the glycocolle ring under the formation of [PtG1(G1H)Cl] (G1 = glycocolle radical) occurs in the first stage. This compound reacts further with HCl under the formation of [Pt(G1H)₂Cl₂]. The compound

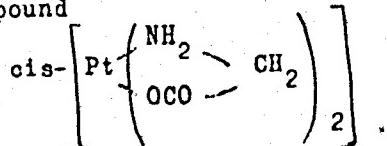


was synthesized with a yield of approximately 70%. Ammonia splits the

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Complex Compounds of Bivalent
Platinum With GlycocolS/078/60/005/009/022/040/XX
B017/B058

glycocol ring of the compound



and a NH_3 group takes the place of the carboxyl group. The preparation of $[\text{PtG1}_2(\text{NH}_3)_2]$ is described in detail. This compound crystallizes prismatically, and is dissolved in water at 25°C up to about 1.7%. It is a non-electrolyte. It can easily be solved in acid under the formation of an electrolyte of the form $[\text{Pt}(\text{G1H})_2(\text{NH}_3)_2]\text{X}_2$, and by neutralization with alcali liquors it can be retransformed into the non-electrolyte $[\text{PtG1}_2(\text{NH}_3)_2]$. An attempt to prepare pure $[\text{PtG1}_2\text{NH}_3]$ with only one split glycocol ring failed. There are 1 figure, 1 table, and 2 Soviet references.

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